

**EPA National Remedy Review Board
Ashland/NSP Lakefront Site
October 6, 2008
Statement by Northern States Power Company**

Background

Northern States Power Company, a Wisconsin corporation, d/b/a Xcel Energy (NSPW), appreciates the opportunity to provide the National Remedy Review Board (Board) comments on the cleanup options under consideration for the Ashland/NSP Lakefront Site (Site). We support the Board's mission of promoting consistent and cost-effective response actions for complex sites. As such, we strongly advocate the selection of the specific remedial options presented below as those that best comport with the considerations set forth in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

Since NSPW was first notified in 1994 by the Wisconsin Department of Natural Resources (WDNR) of contamination at the Site, NSPW has engaged in a comprehensive investigation of the Site's history. At the request of the EPA, NSPW submitted its findings in a report titled the Ashland/NSP Lakefront Site PRP Investigation Report dated June 20, 2006. Subsequently, NSPW submitted two addenda: May 30, 2007 and July 9, 2008. This report (with addenda) documents the recollections of dozens of witnesses (via depositions and affidavits) and compiles and reviews historical records, engineering drawings, photographs, and similar archives. The report concludes that other entities (beyond the former MGP) contributed to the contamination at the Site, including the Schroeder Lumber Company (Schroeder). Schroeder, long since bankrupt, operated a wood treatment facility at the Site. Forensic evidence and depositions of eye witnesses corroborate the release of creosote and other hazardous substances throughout that portion of the Site once occupied by Schroeder. The City of Ashland (City), subsequent owner of the Schroeder property, and two railroads, the Canadian Pacific and the Canadian National, also have potential liability at the Site pursuant to CERCLA. Copies of this submittal are available upon request.

In addition to the historical reviews, NSPW has 1) implemented two interim response actions at the Site, 2) conducted a groundwater cleanup demonstration study pursuant to EPA's SITE program, and 3) performed a Remedial Investigation and Feasibility Study (RI/FS) pursuant to an Administrative Order on Consent (AOC). In 2000, NSPW installed a tar removal system to treat groundwater beneath the former manufactured gas plant (MGP). A second interim action was performed in 2002 when NSPW removed and capped a seep area in the city park. In 2006 and early 2007, NSPW demonstrated the performance of an innovative *in situ*, chemical oxidation technology to treat groundwater and contaminated soil as part of EPA's SITE program. Indeed, since 1994 consultants for WDNR and NSPW have fully investigated the nature and extent of contamination at the Site. The compilation of this work is reflected in the Remedial Investigation Report (RI) prepared by NSPW and approved by EPA on February 5, 2008. The Draft Feasibility Study Report (FS) was submitted in October 2007, followed by a revised draft in May 2008. According to EPA's remedial project manager (RPM), the FS is anticipated to be approved this fall.

In anticipation of that approval and the presentation of the Site before the Board, NSPW initiated this summer a series of stakeholder meetings to explore interest in collaborating for Site cleanup. The parties involved in the first meeting held on June 5th included the City, WDNR and NSPW. During the meetings, NSPW presented a framework for a collaborative Site cleanup, including the sediments in Chequamegon Bay of Lake Superior (Bay). While the discussions are ongoing and a number of details remain to be worked out, NSPW is pleased to report that its framework for cleaning up the Site (as described herein) has generally been well received and the City and WDNR have indicated they acknowledge the merits of the proposed framework.

While the media specific remedies proposed by NSPW in this statement may not be identical to the integrated remedial scenarios that may be presented to you by the RPM, Remedial Scenario IV in the FS embodies most of the ideas supported by NSPW and the concepts receiving support among the stakeholders meeting in Ashland.

All the integrated remedial scenarios presented in the FS are consistent with the NCP and relevant Superfund policy and guidance. Furthermore, NSPW has fully evaluated all the cleanup alternatives pursuant to the nine CERCLA-defined FS evaluation criteria. That evaluation is available in the Comparative Analysis of Alternatives Technical Memorandum – Ashland/Northern States Power Lakefront Superfund Site and is further presented in the FS.

Sediment

The media of greatest concern and cost at the Site is the bay sediments. Subject to certain important conditions, NSPW is prepared to contribute substantial funding to excavate or dredge the sediments exceeding the 9.5 ppm preliminary remedial goal (PRG) for total PAHs. In the context of the FS, this alternative is labeled SED-4. There are four sub alternatives within the dredging family of SED-4, depending on whether 1) the dredging is performed mechanically or hydraulically, and 2) the dredge spoil is thermally treated or not. NSPW suggests these specific decisions should be deferred until the pre-design testing has been completed and all applicable design inputs have been fully evaluated. As stated in the Executive Summary of the FS, NSPW believes dredging (i.e., removal), as opposed to capping, provides “the most long-term benefit at the least cost and with the fewest short-term technical implementation issues.”

While NSPW generally supports dredging of the bay sediments, there are at least four conditions or remedial design issues of which we are currently aware that critically impact NSPW’s support for a cleanup requiring the bay to be dredged to the PRG.

The first design issue is that NSPW envisions a pre-design dredging effort will be needed to determine 1) how best to dredge (e.g., mechanical or hydraulic), 2) how to and whether it may be cost-effective and feasible to excavate in a relatively dry condition the contaminated sediment in the near-shore areas, and 3) how to safely and cost-effectively first remove the massive amount of wood debris encountered at the Site. It is estimated that 25,000 cubic yards of wood, bark, sawdust residues, etc. will have to be removed/managed in order to ultimately remove the impacted sediments.

The second issue relative to the dredging option is how to document the performance of this removal option while developing monitoring and management plans for a dredging remedy that avoids or dramatically minimizes the risk and cost of re-dredging. The Board is very knowledgeable regarding the management issues posed by dredging residuals, both “generated residuals” and “undisturbed residuals.” These issues were discussed in the 2007 National Research Council’s report on dredging of sediment at Superfund Megsites. At the August 12, 2008 meeting of the parties in Ashland, NSPW presented a dredging residuals management plan. The plan specifically includes confirmation sampling to assess performance of the dredging remedy relative to the PRG, and precise details for confirmation sampling will be refined during pre-design testing and the design phase.

The dredging residuals management plan proposed for the Ashland site is predicated on three factors:

- 1) Accurate Identification of Dredge Prism: Modern dredging control technology is sufficiently sophisticated that there is confidence that sediments identified for removal within the dredge prism will be dredged and removed, with the exception of generated dredging residuals. Once the dredge prism is properly established based upon historical sediment sampling, the potential for leaving a significant amount of undisturbed residuals is acceptably low. This is especially true if a conservative dredging prism is established with an appropriate allowance for overdredging. Only on-going real time visual confirmation using underwater video or diver inspection is needed to supplement the dredge control system verification that all areas within the dredge prism have been covered. This implies two things: a) modern dredge control technology using precise positioning systems and real time monitoring of dredge head and sediment bed elevation can ensure complete coverage of all areas within the dredge prism; and b) with the exception of needing to manage generated dredging residuals, the success of dredging is dependent primarily on proper characterization of the contaminated sediments and appropriate design of the dredge prism.
- 2) Placement of Backfill and Post-Dredge Sampling: Since re-dredging to capture generated dredging residuals has been demonstrated to be ineffective in many cases, all dredged areas will be backfilled with a six-inch layer of “fish mix” as a planned component of the dredging operation. Fish mix is a well-sorted, clean, sand and gravel mixture that will encourage fish spawning and recruitment of aquatic insects. Post-dredge sampling will be performed to the extent necessary to establish a baseline for the long-term monitoring program.
- 3) Long-Term Operations and Monitoring Plan: Recognizing the need for assessing and documenting the success or performance of the remedy, a long-term monitoring plan that will include periodic monitoring of contaminant levels in surface sediments will be developed and implemented. The long-term monitoring plan also will include contingency plans for implementation of additional remedial action (e.g., adding another six inches of fish mix) if surface sediments have not met the PRG within a reasonable time.

The third issue is whether dredge spoils and contaminated soil in general from the Site should be thermally treated. Historically, NSPW has thermally treated, where feasible, contaminated soil and debris from all three of the other MGPs it has remediated in Wisconsin. Therefore, NSPW contemplates thermal treatment at Ashland assuming fuel prices are not excessive and the treated soil is amenable for reuse in redeveloping Kreher Park. However, at this point (i.e., prior to the pre-design studies and final remedial design) it is premature to resolve this issue. Therefore, NSPW requests it be allowed to propose thermal treatment during the design phase after it has determined the specific media from the Ashland site that will be amenable to thermal treatment.

The fourth design issue is whether a permanent breakwater will be built prior to the dredging activity and who will fund the breakwater if it can be built before dredging. If a permanent breakwater cannot be built within the time allowed, a temporary, sheet pile barrier estimated to cost approximately \$2.0 million will need to be built and subsequently removed to support either mechanical or hydraulic dredging within the bay.

By supporting the dredging remedy described in SED-4, NSPW is rejecting the other alternatives for sediment including the confined disposal facility (SED-2), the other hybrid alternative of partial dredging coupled with capping (SED-3), and the dry excavation alternative of the entire bay as identified as SED-5, commonly referred to as the “dredge in the dry” option. Although SED-2 and SED-3 may be somewhat less costly in the near term, NSPW believes they pose long-term operational and maintenance costs, thereby rendering them not to be cost effective relative to alternative SED-4.

Similarly, the full bay dry excavation alternative (SED-5) is deemed to be 1) no more environmentally protective than SED-4 in the long term once the fish mix is placed and the ecosystem is allowed to reestablish itself, 2) overly expensive, thereby not cost-effective, 3) fraught with technical challenges (e.g., holding back substantial depths of Lake Superior), 4) prone to exacerbate volatilization of PAHs and benzene, increasing exposure to construction workers and the community at large, and 5) excessive in duration (e.g., estimated to take four years to dredge in the dry versus approximately two years) for alternative SED-4.

Kreher Park

At the lakefront (i.e., Kreher Park), NSPW intends to contribute substantial funding to remove hot spot soil contamination as identified in the RI. Assuming thermal treatment is used where feasible, the applicable alternative from the FS would be S-5A. Following partial removal of the contaminated soils, NSPW recommends that Kreher Park will be partially capped and developed to support the City’s Waterfront Development Plan.

The soil alternative for Kreher Park that must be unequivocally rejected by the Board is S-3B. That option would require the complete excavation of over ten acres of fill in Lake Superior at an estimated cost of \$35 million. The fill includes a former city dump, huge quantities of wood debris (slabs, sawdust and bark) and thousands of cubic yards of relatively clean fill currently capping the area and preventing human contact with contaminated materials. The City owns this park and needs it to remain land to support 1) the existing marina, 2) the proposed expansion to the marina, and 3) the planned

development of Kreher Park for other tourism, community activities, and economic development. Kreher Park is an integral and vital component of the City's Waterfront Development Plan.

NSPW further recommends that the shallow groundwater in the park be remediated via one of the *in situ* treatment methods described in the FS along with surface and vertical barriers establishing hydraulic control to avoid the recontamination of the lake sediments. The alternatives supported by NSPW are described and labeled in the FS as GW-2 and GW-6.

Filled Ravine and Area Occupied by the Existing Service Center

The RI documents PAH contaminated soils on the bluff in the vicinity of the former MGP; this area currently supports the garages and warehouses constituting NSPW's existing service center. In this area, NSPW is prepared to fully fund limited soil removal (hot spot excavation) in the particular areas of the filled ravine and the existing service center. This remedial action will require NSPW to relocate all or parts of the service center, demolish most of the current buildings, and then excavate the debris in the former gasholders and portions of the filled ravine. At this point, NSPW envisions thermally treating the soil as applicable. In the context of the FS this alternative is identified as S-5A.

The shallow groundwater on the bluff (not to be confused with the deep aquifer) should be remediated via vertical barriers, partial caps, and hydraulic controls. The FS identifies this remedy as GW-6.

Copper Falls Deep Aquifer

The deep aquifer below the service center and former MGP is called the Copper Falls. In this area below the service center, NAPL extends from depths of approximately 30 to 70 feet. Fortunately artesian conditions restrict the migration of NAPL and related contaminants to the underlying aquifer. Although the RI determined that the groundwater flow from the upper bluff area is north toward Lake Superior, the lateral extent of contamination beneath Kreher Park is limited by a stagnation zone located between the shoreline and the face of the bluff. This stagnation zone restricts further contaminant movement to the north in the direction of the bay. Furthermore, there are no known human receptors to this NAPL plume.

As stated earlier, a low-flow (3 gpm) pumping system was installed in 2000 at the service center to recover NAPL from the Copper Falls aquifer. The groundwater entrained in the process is treated and discharged to the sanitary sewer system. To date the system has removed approximately 10,000 gallons of free product from the aquifer.

Free product recovery was further enhanced in 2006 through 2007 when NSPW participated in an EPA SITE Program demonstration of an *in situ*, chemical oxidation technique to treat groundwater and contaminated soil at the Site. EPA's report documenting that study concluded 1) contaminants of concern were reduced by the proprietary reagent, 2) native bacteria were not harmed by the product and hydrocarbon degraders appear to

have increased as a consequence of the treatment, and 3) recovery of DNAPL by the existing system increased significantly after treatment.

Therefore, NSPW believes *in situ* treatment (GW-3) by the demonstrated reagent or other products appears promising for remediating this plume and should be endorsed by the Board. The specific technique to be used *in situ* has not been determined at this time but the FS identifies a number of promising technologies to be fully evaluated in the design phase. NSPW further advocates that the NAPL plume below the service center be remediated by continuing to operate the current tar removal system (GW-9A) pending the fully evaluated performance of the chosen *in situ* remedial action.

NSPW rejects the more costly approach of enhancing the current groundwater extraction as described in the FS as alternative GW-9B. Based upon the promising results of the SITE demonstration at this site, it would be logical to pursue this or similar promising, innovative technologies rather than abandon it in favor of developing yet another long-term pump and treat system. Alternative GW-9B is fraught with perpetual operational and maintenance costs and other burdens including restrictions on redevelopment of the upper bluff property. Thus, NSPW requests the Board support alternatives GW-3 coupled with GW-9A while rejecting GW-9B.

Conclusion

NSPW has worked long and hard on the Ashland/NSP Lakefront Site. Subject to agreement on certain important conditions, NSPW is ready, willing and able to proceed to clean up the Site in a cooperative manner with the EPA, WDNR, the City and other stakeholders. The remedies endorsed by NSPW in this statement favorably satisfy the nine CERCLA evaluation criteria and will result in 1) a timely and environmentally protective remediation of the Site, 2) a stronger local economy for the City as it implements its Waterfront Development Plan, and 3) a cost-effective cleanup plan. NSPW requests and urges the Board to support its recommendations, thereby promoting the timely, protective and cost-effective cleanup of the Ashland/NSP Lakefront Site.